

Respiratory Protection	Manual	ESHQ
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1.0 PURPOSE AND SCOPE

(5.1.1, 5.1.2)

This document adopts DOE-0352, “Hanford Site Respiratory Protection Program (HSRPP)” by reference. DOE-0352 sets minimum requirements for respiratory protection at the Hanford Site.

Where DOE-0352 refers to radiological engineer, such tasks will be performed by a Washington River Protection Solutions (WRPS) radiological planner.

2.0 IMPLEMENTATION

This standard is effective on the date shown in the header.

3.0 STANDARD

DOE-0352 is the Hanford Site’s Respiratory Protection standard. All Hanford-Site Prime Contractors are required to adhere to it for the implementation of respiratory protection requirements as set by Federal Code of Regulations 10 CFR 851, “Worker Safety and Health,” where respiratory protection is required.

WRPS has implemented work practices that go beyond the minimum respiratory protection requirements set by DOE-0352. Such work practices are identified below and throughout this document.

3.1 Breathing-air Distribution Systems

1. In addition to requirements specified in DOE-0352, Section 12.2, “Breathing-air Distribution Systems,” WRPS has adopted the following work practices regarding breathing-air distribution systems:
 - Only qualified employees are assigned to perform work requiring the use of atmosphere-supplying respirators and/or operation of a breathing-air compressor or compressed air bottle carts
 - The need for using breathing-air compressors and atmosphere-supplying respirators is evaluated by industrial hygienists to ensure they are used in compliance with the requirements of 29 CFR 1910.134(I), “Respiratory Protection,” and to ensure that certified lab results meet Grade D breathing air requirements
 - Management is informed of any problems or deficiencies pertaining to the use of the atmosphere-supplying respiratory equipment.

3.2 Issuance

1. WRPS follows TO-020-028, for the issuance for respiratory protection. The user is responsible to maintain positive control as detailed in DOE-0352, Section 14.0, “Positive Control of Respiratory Protection Equipment (RPE).” It is management’s responsibility to provide means for the worker to maintain positive control.

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2. WRPS permits the use of the Respirator Electronic Tracking System (RETS) as the issuance log in issue stations with WI-FI access.
3. WRPS also has special instruction regarding respirators awaiting chemical and radiological release:
 - a. Respirators awaiting chemical contamination release data (such as those used in an asbestos regulated area) may be kept in a sealed plastic bag per applicable procedure prior to return to the respirator issuing station. The respirator issue station shall be notified of affected respirators that are awaiting release

Radiological release procedures apply only to respirators used for protection in contamination, high contamination, or airborne radioactivity areas

New respirators or cartridges may have to be obtained if radiological release cannot be obtained

If daily return, after use, is impractical, contact the Respiratory Protection Program Administrator or Industrial Hygiene (IH) management to establish alternate return cycles.”

3.2.1 Issues and Concerns

WRPS requires additional work practices regarding the management of respiratory protection issues and concerns. Workers that experience an issue or issues regarding the function, operation, or cleanliness of their issued RPE, shall document the problem on form A-6006-205 (Respiratory Equipment Issues and Concerns). The form is available at WRPS mask stations, and Hanford site forms (<http://gss.rl.gov/siteforms>). It is mandatory to report all RPE issues and concerns. It is also mandatory to use form A-6006-205 to report and document all RPE issues and concerns. The Respiratory Protection Program Administrator (RPPA) shall use this avenue for the purposes of identification, resolution, and trending RPE issues. Trends shall be communicated to appropriate organizations as necessary.

3.2.2 Abnormal, Catastrophic Failures, Medical or Physical Symptoms Regarding RPE (Major)

If odors, physical symptoms, medical situations, and catastrophic failures are discovered, the responsibilities are listed below.

Employee (user):

- Reports and provides his or her RPE to his or her Field Work Supervisor (FWS) for sequestration
- Proceeds to HPMC/complete other actions as necessary
- Proceeds to Mask Issue Station (MIS) to complete the “Respiratory Equipment Issues and Concern form” (A-6006-205).

Field Work Supervisor (FWS):

- Sequesters RPE

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- Places face piece inside a clean plastic bag to prevent unauthorized handling and use
- Covers regulator in a clean plastic bag, sequester as appropriate (inside rad bags inside of RBA etc.)
- Contacts Central Shift Office (CSO) immediately and notifies of situation
- Transports equipment to the MIS (designee ok).

Central Shift Office (CSO): Communicates the situation to the RPPA

MIS:

- Further sequesters the RPE received to prevent unauthorized access or handling
- Ensures Issues and Concerns form is completed (assistance to employee is ok).

Respiratory Protection Program Administrator (RPPA):

- Evaluates if RPE needs IH sampling and what type of sampling is needed
- Apprises employee of path forward as requested
- Samples RPE per IH sample plan (IHSP)
- Sends samples to Laboratory (expedited/standard turnaround/etc.)
- Ensures lab results are received, processed, and evaluated
- Sends validated sample results to the employee
- Provides copies of sample results to employee, with copies to their supervisor, safety representative, union representative and WRPS Safety Manager.

If RPPA determines the issue needs follow-up other than IH Sampling:

- Apprises employee of next steps.
- Continues discussion/evaluations/notifications/etc.
- Notifies employee of conclusion.

A flow diagram outlining the above processes is located in Figure 1

3.2.3 Respiratory Protection Equipment with Damage, Leaks etc. (Minor)

In the event that an employee discovers damaged/leaking RPE, the responsibilities are listed below:

User:

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- Returns the problem equipment to the MIS, while maintaining positive control of his/her equipment.
- Requests feedback on problem's resolution as necessary on form (A-6006-205).

MIS:

- Ensures Issues and Concerns form (A-6006-205) is completed (assistance to employee is ok).
- Tags Equipment for Repair and sends to HFD,

RPPA:

- Reviews the completed Issues and Concerns form and concurs with mask issue station personnel that equipment needs to be tagged and sent to Hanford Fire Department (HFD) for evaluation /repair/recertification.
- Communicates with the employee about the path forward, as requested
- If the RPPA reviews the completed Issues and Concerns form and determines the issue needs further follow-up discussions/evaluations/notifications/etc.:
 - Apprises the employee of the next steps.
 - Continues discussion/evaluations/notifications/etc.
 - Notifies the employee of the conclusion.
- Retains completed and closed out Issues and Concerns forms, and confirms they are appropriately submitted to IDMS.

Figure 2 contains a flow diagram outlining the above processes. If there is an urgent issue involving RPE, the Hanford Site Respiratory Protection Program (HSRPP) committee chair shall be notified immediately. This is in addition to, and does not replace, any required notifications under DOE orders and company policy.

3.3 Use of Respiratory Protection Equipment

Referencing DOE-0352, Section 15, "Use of Respiratory Protection Equipment," WRPS has additional work practices for air-line respirators, self-contained breathing apparatus (SCBA), and escape-only and emergency use respirators.

3.3.1 Air-Line Respirators

1. Employees operating bottle cart systems shall be qualified and trained on breathing-air cart operations through Volpentest Hazardous Materials Management and Emergency Response (HAMMER) federal training center. Employees assigned to attend the breathing air cart will remain at the cart at all times while the system is in use.

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2. The industrial hygienist can provide a safety overview of the set up and use of all breathing-air systems.

3.3.2 Self-Contained Breathing Apparatus

1. WRPS has the following additional work practices regarding cold weather considerations and controls for supplied air RPE.
 - a. When performing work that requires supplied air respiratory equipment in cold temperature environments (<40 °F), the SCBA Rack assembly and the user will be required to be in a warm area for no less than 15 minutes to ensure both have enough time to warm prior to proceeding with work.
 - b. Iced/frosted pressure reducer blocks elevate the chances of them developing air leaks during SCBA bottle change outs (i.e. when switching to a fresh SCBA bottle). Whenever icing/frosting is noted, it is therefore advisable (required when <40°F) to warm the SCBA rack assembly to eliminate such icing/frosting prior to bottle change outs.
 - c. For temperatures <32 °F, nose cups will be used to prevent fogging. When performing bottle change-out, perform an inspection on the regulator.

To remove moisture, perform the following:

- Wipe out the exterior of the regulator with an absorbent towel
 - Position regulator, face down, over plastic lined receptacle
 - Depress and hold the on/off switch, turn the regulator upside down and shake it, then turn it over and repeat the process
 - If the respirator cannot be cleared, replace the unit.
2. Purge valves are for emergency use only. The only non-emergency use of purge valves is the required initial equipment checks.
 3. The site-wide standard requires a buddy system when entering immediately dangerous to life or health (IDLH) environments as detailed in 29 CFR 1910.134. In addition to this, WRPS requires a buddy system while wearing supplied air. The buddy system is used with the intent to provide assistance in the event that one of the users is unable to perform self-rescue by leaving the farm, area or removing the equipment. The buddy system requires both parties to be in close proximity (line of sight) to each other so that assistance can be provide in an adequate time period. The adequate time period must be agreed to between the buddies and should include type of task, duration, terrain and other obstacles that may be assessed upon arrival at the location of use.

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3.3.3 Escape-Only and Emergency Use Respirators

1. Escape-only respirators are intended only to be used for exit from an emergency situation such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment that may or does result in an uncontrolled significant release of airborne contaminants.
2. When staged for emergency use, SCBAs shall be kept easily accessible to the work area, stored in compartments or covered, and clearly marked as containing emergency RPE.
3. Escape-only respirators and emergency use SCBAs shall not be considered staged until they have been fully assembled and properly inspected on a monthly basis.

3.3.4 Management Directed Use

1. When directed by management, specific RPE requirements may be mandated as defense-in-depth controls independent of previously identified requirements or evaluations (Tank Vapor Information Sheet [TVIS], job-specific respiratory protection form [RPF], etc.). These requirements are implemented through specified tasks as directed by management.
2. When both a job-specific RPF and management-directed use of RPE have been indicated, the RPE with the highest level of protection shall be used.
3. Where management-directed use of RPE introduces a greater safety hazard than the potential exposure, a safety evaluation and Alternative Respiratory Protection assessment (ARPA) is required to document the evaluation, and alternate controls that will be implemented to allow for reduced RPE protection.

3.3.5 Alternative Respiratory Protection Assessment

An ARPA is unique to WRPS and is required for work activities where the use of respiratory equipment introduces a greater safety hazard than the potential exposure to chemical vapors (e.g., supplied air work within an arc flash boundary, elevated work on ladders).

- In order to use the ARPA, all alternative feasible means to perform work using the required RPE must be evaluated prior to conducting the required safety and IH evaluation for the ARPA.
- The ARPA applies to specific work activities that minimize the number of employees at greater risk. Not all employees associated with the work activity will be eligible for alternative respiratory protection.
- Once the ARPA is approved, voluntary upgrade of respiratory protection will not be granted for that specific work activity.

3.3.5.1 ARPA Implementation

The ARPA is initiated by completing the requestor section of the Alternative Respiratory Protection Assessment form A-6006-751.

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- Level 1 Management sign off is required to ensure no other feasible means to perform work is possible.
- The ARPA form 6006-751 is forwarded to Safety and IH for completion of evaluation.
- Safety & IH representatives evaluate the additional hazards from the proposed work activity and the hazards of the required respiratory protection equipment.
- The hierarchy of controls is used to establish ARPA requirements/controls.
- The evaluation and controls are documented on form A-6006-751.
- The requestor obtains final approvals on form A-6006-751.
- The planner ensures IH and safety requirements and controls have been appropriately implemented via the work package instructions, etc.
- The approved ARPA is attached to the work package document for record retention.
- The completed and signed ARPA is sent to the Communications & Public Relations (C&PR) Settlement Agreement email (^SA_Inbox) for posting to the Hanfordvapors.com website.
- The completed and signed ARPA shall also be sent to ^IH Records for record storage.

3.4 Maintenance and Care of Respiratory Protection Equipment

3.4.1 Cleaning and Sanitizing

1. Additional work practices supplementing DOE-0352, Section 16.1, "Cleaning and Sanitizing," are performed at WRPS via Procedure TO-020-024 for cleaning Scott EZ flow regulators.
2. WRPS requires users of respirator masks to wipe the sealing surface with clean water and a lint free cloth prior to donning the face piece. This requirement is used as a secondary measure to protect the workforce from possible irritants on mask sealing surfaces.

3.5 Records

The following information supplements the record keeping requirements as found in DOE-0352, Section 18, "Recordkeeping."

The following records are generated:

- Respiratory Protection form (A-6005-593)
- Respiratory Equipment Issue and Concerns forms (A-6006-205)

The Alternative Respiratory Protection Assessment (A-6006-751) and The Respiratory Equipment Issue and Concerns form (A-6006-205) are uploaded to IDMS by IH records. The

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Respiratory Protection form (A-6005-593) and Alternate Respiratory Protection Assessment (A-6006-751) are uploaded to IDMS by IH records and are also placed in the work package. The records custodian identified in the Company Level Records Inventory and Disposition Schedule (RIDS) is responsible for record retention in accordance with TFC-BSM-IRM_DC-C-02.

4.0 DEFINITIONS

ARPA (Alternative Respiratory Protection Assessment). A written document unique to WRPS required for work activities where the use of respiratory equipment introduces a greater safety hazard than the potential exposure to chemical vapors (e.g., supplied air work within an arc flash boundary, elevated work on ladders).

5.0 SOURCES

5.1 Requirements

5.1.1 DOE-0352, "Hanford Site Respiratory Protection Program (HSRPP)."

5.1.2 10 CFR 851, "Worker Safety and Health."

5.2 References

5.2.1 TFC-BSM-IRM_DC-C-02, "Records Management."

5.2.2 TFC-OPS-MAINT-C-01, "Tank Operations Contractor Work Control."

5.2.3 TO-020-024, "Clean E-Z Flow Regulator for SCBA and Supplied-Air Respirators."

5.2.4 TO-020-028, "Respirator Issuance and Control."

Figure 1. Issues and Concerns Process Flow Chart, Major Conditions/Issues.

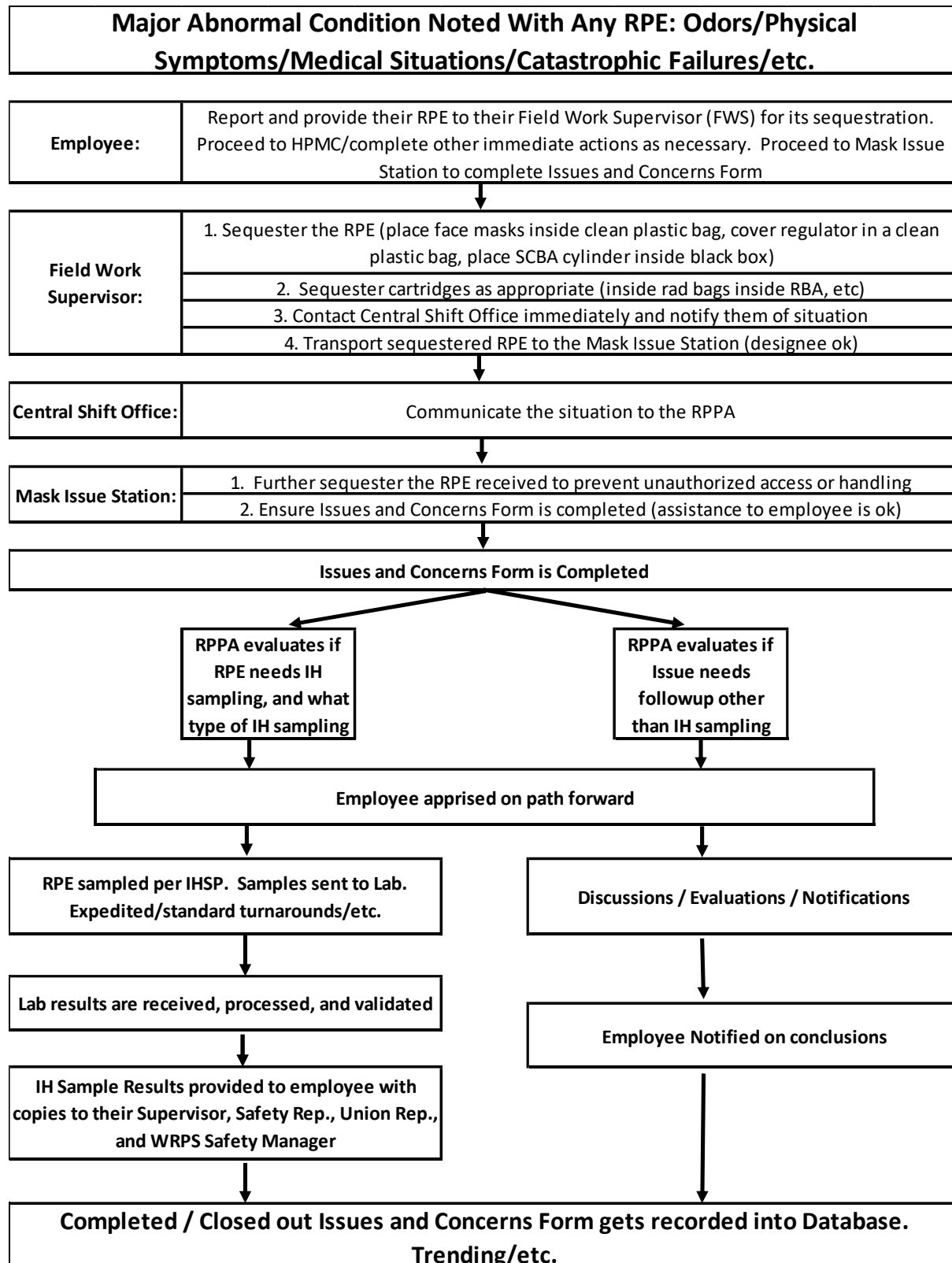


Figure 2. Issues and Concerns Process Flow Chart, Minor Conditions/Issues

